C V Raman, the Pride of India

Lesson Explanation

It was the headquarter of the Indian Association for Cultivation of Science on the busy street of Bowbazaar in Calcutta, when one fine evening in the month of December, in the year 1927, a young man K. S. Krishnan rushed to announce a news to Chandrasekhar Venkata Raman. Raman was showing a visitor some of his instruments and it was then Krishnan broke out the news that Professor Compton had won the Nobel Prize.

Hearing the news, Raman was equally delighted and was smiling at the visitor then he was lost in his thought and then he suddenly said if Compton Effect for X-Ray was true then it must have been same for light too.

A few years earlier, A.H. Compton had shown that the nature of X-Ray changes when passed through matter. Hence the effect was later termed as Compton Effect.

The question that bugged Raman was if X-Ray could change its nature, light could also change its when passed through transparent medium. For five years Raman had been doing research in Optics without any sophisticated equipment available in his laboratory. But he was equally

confident that he would make a breakthrough with some minor tweaks in the available equipment.

On 16th March, 1968, Raman announced his discovery a new radiation to an assembly of scientists in Bangalore, presently known as Raman Effect. His discovery won him the Nobel Prize in 1930. With an equipment worth mere Rs. 200.00, Raman caught the attention of the entire world.

Born on 7th November, 1888 in Tiruchirapalli in Tamil Nadu, Raman was a brilliant student. His father was physics teacher in a college. After matriculation, his parents were keen to send him abroad but on medical grounds he was advised against it. Raman stayed in the country to do M.A. from Presidency College in Madras.

Science had already made an impression on him and he had already began to write research papers for science journals. At the age of 19, he became the member of the Indian Association for Cultivation Science. At the same time, respecting his parents he took an administrative job. However, due to his intense interest in science, he used to spend his hours after his office in the lab of the Association.

Raman in his youth was interested in acoustics, the science of sound and thus he studied how

stringed instruments produced harmonious music.

In 1924, he was elected to the Royal Society of London and the British Government made him a knight of the British Empire in 1929.

He advised the young scientist to look around them and explore as he said, “The essence of science is independent thinking and hard-work, not equipment.”

He was the first Indian Scholar to receive the Noble Prize who studied wholly in India. He was also the first Asian and first non-white to win such a great award in science.

He passed away in 1970 on November 21. He discovered the “Raman Effect” on February 28, and thus it is celebrated as the Science Day to commemorate his remarkable achievement in science.